

#### US005225223A

# United States Patent 1991

## Vitzthum et al.

[11] Patent Number:

5,225,223

[45] Date of Patent:

Jul. 6, 1993

# [54] PROCESS FOR THE PREPARATION OF SOLUBLE COFFEE

[75] Inventors: Otto G. Vitzthum; Klaus D. Koch,

both of Bremen, Fed. Rep. of

Germany

[73] Assignee: Jacobs Suchard AG, Zurich,

Switzerland

[21] Appl. No.: 801,314

[22] Filed: Dec. 2, 1991

Field of Search ...... 426/434, 594, 386, 387, 426/432

[56] References Cited

### U.S. PATENT DOCUMENTS

3,700,463	10/1972	Bolt et al		
3,944,677	3/1976	Katz.		
4,379,172	4/1983	Liu	426/434	X
4,534,985	8/1985	Gasau	426/434	X
4,673,580	6/1987	Matsuda et al	426/434	X
4,707,368	11/1987	Vogel et al	426/434	X
4,798,730	1/1989	Scoville et al		

### FOREIGN PATENT DOCUMENTS

965638 4/1975 Canada . 1038229 9/1978 Canada .

0097466 1/1984 European Pat. Off. .

Primary Examiner—Joseph Golian Attorney, Agent, or Firm—Thomas A. Marcoux; Linn I. Grim; Thomas R. Savoie

[57] ABSTRACT

The invention relates to a process for preparing soluble coffee with an infusion quality similar to that of roast

bean coffee, with which instant-typical off-flavour characters are no longer detectable, with which ground roast coffee of a particle size of at most approximately 1.8 mm is treated in a percolator with saturated steam in order to separate essential aroma constituents and the separated aroma constituents obtained as condensate, the remaining roast coffee is subjected at high pressure with extraction water to a primary extraction with the aid of at least 2 percolators, the portion evaporated through pressure-relief is condensed and obtained as further aroma condensate, and the non-evaporated portion placed in interim storage as primary extract, the remaining roast coffee is then subjected at high pressure and increased temperature to a secondary extraction in at least 2 percolators, the portion of the extract evaporated through pressure-relief is separated and discarded, and the non-evaporated portion obtained as secondary portion and optionally divided into a first portion and a second portion, the remaining roast coffee optionally subjected to a tertiary extraction at high pressure and increased temperatures in at least 2 percolators, the portion evaporated through pressure-relief is discarded and the non-evaporated portion obtained as tertiary extract, the second portion of the secondary extract and the tertiary extract, optionally after being combined. optionally extracted with liquid or supercritical CO<sub>2</sub> at a high pressure, the extracted portion discarded and the remaining extract obtained, the various extracts condensed in multi-stage evaporators, combined and mixed with the two aroma condensates, and the finally obtained extract with a solids concentration of approximately 35 to 55% freeze- or spray-dried in the usual way, the percolators used having a length/diameter ratio of approximately 3.2:1 to 0.9:1.

9 Claims, 1 Drawing Sheet

